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SEQUENCE LISTING

<110> Schenk, Dale B.
Bard, Frederique
Vasquez, Nicki
Yednock, Ted

<120> Prevention and Treatment of Amyloidogenic Disease

<130> 15270J-004750UC

<140> US 09/580,015

<141> 2000-05-26

<150> US 09/322,289

<151> 1999-05-28

<150> US 09/201,430

<151> 1998-11-30

<150> WO PCT/US00/14810

<151> 1998-11-30

<150> US 60/080,970

<151> 1998-04-07

<150> US 60/067,740

<151> 1997-12-02

<160> 77

<170> PatentIn Ver. 2.1

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 from AN1792 sequence (human Abeta42, beta-amyloid
 peptide)

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<210> 2

<211> 10

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<223> Description of Artificial Sequence:10-mer peptide
 from AN1792 sequence (human Abeta42, beta-amyloid
 peptide)

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<400> 2
Glu Ile Ser Glu Val Lys Met Asp Ala Glu
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<210> 3
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      from AN1792 sequence (human Abeta42, beta-amyloid
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Ile Ser Glu Val Lys Met Asp Ala Glu Phe
<210> 4
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Ser Glu Val Lys Met Asp Ala Glu Phe Arg
 <210> 5
 <211> 10
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 Glu Val Lys Met Asp Ala Glu Phe Arg His
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 <210> 6
 <211> 10
 <212> PRT
 <213> Artificial Sequence
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 <223> Description of Artificial Sequence:10-mer peptide
        from AN1792 sequence (human Abeta42, beta-amyloid
        peptide)
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<400> 6
Val Lys Met Asp Ala Glu Phe Arg His Asp
                  5
<210> 7
<211> 10
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<400> 7
Lys Met Asp Ala Glu Phe Arg His Asp Ser
<210> 8
<211> 10
<212> PRT
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 <400> 8
 Met Asp Ala Glu Phe Arg His Asp Ser Gly
                   5
 <210> 9
 <211> 10
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 Asp Ala Glu Phe Arg His Asp Ser Gly Tyr
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                   5
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 <211> 10
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Ala Glu Phe Arg His Asp Ser Gly Tyr Glu
<210> 11
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Glu Phe Arg His Asp Ser Gly Tyr Glu Val
<210> 12
<211> 10
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 Phe Arg His Asp Ser Gly Tyr Glu Val His
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 <210> 13
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       from AN1792 sequence (human Abeta42, beta-amyloid
       peptide)
 <400> 13
 Arg His Asp Ser Gly Tyr Glu Val His His
                   5
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 <210> 14
 <211> 10
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> Description of Artificial Sequence:10-mer peptide
       from AN1792 sequence (human Abeta42, beta-amyloid
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peptide)

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<400> 14
His Asp Ser Gly Tyr Glu Val His His Gln
                  5
<210> 15
<211> 10
<212> PRT
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<220>
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      from AN1792 sequence (human Abeta42, beta-amyloid
      peptide)
<400> 15
Asp Ser Gly Tyr Glu Val His His Gln Lys
 <210> 16
 <211> 10
 <212> PRT
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       from AN1792 sequence (human Abeta42, beta-amyloid
       peptide)
 <400> 16
 Ser Gly Tyr Glu Val His His Gln Lys Leu
                   5
 <210> 17
 <211> 10
 <212> PRT
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 <220>
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       from AN1792 sequence (human Abeta42, beta-amyloid
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 <400> 17
 Gly Tyr Glu Val His His Gln Lys Leu Val
                                       10
                    5
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  <210> 18
  <211> 10
  <212> PRT
  <213> Artificial Sequence
  <220>
  <223> Description of Artificial Sequence:10-mer peptide
        from AN1792 sequence (human Abeta42, beta-amyloid
        peptide)
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<400> 18
Tyr Glu Val His His Gln Lys Leu Val Phe
                  5
<210> 19
<211> 10
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence:10-mer peptide
      from AN1792 sequence (human Abeta42, beta-amyloid
      peptide)
<400> 19
Glu Val His His Gln Lys Leu Val Phe Phe
<210> 20
<211> 10
<212> PRT
<213> Artificial Sequence
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 <400> 20
 Val His His Gln Lys Leu Val Phe Phe Ala
                   5
 <210> 21
 <211> 10
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 <210> 22
 <211> 10
 <212> PRT
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 <220>
 <223> Description of Artificial Sequence:10-mer peptide
        from AN1792 sequence (human Abeta42, beta-amyloid
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peptide)

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His Gln Lys Leu Val Phe Phe Ala Glu Asp
<210> 23
<211> 10
<212> PRT
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<220>
<223> Description of Artificial Sequence:10-mer peptide
      from AN1792 sequence (human Abeta42, beta-amyloid
      peptide)
<400> 23
Gln Lys Leu Val Phe Phe Ala Glu Asp Val
<210> 24
<211> 10
<212> PRT
<213> Artificial Sequence
<220>
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       from AN1792 sequence (human Abeta42, beta-amyloid
      peptide)
<400> 24
Lys Leu Val Phe Phe Ala Glu Asp Val Gly
                                       10
                   5
  1
 <210> 25
 <211> 10
 <212> PRT
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 <220>
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       from AN1792 sequence (human Abeta42, beta-amyloid
       peptide)
 <400> 25
 Leu Val Phe Phe Ala Glu Asp Val Gly Ser
                   5
   1
 <210> 26
 <211> 10
 <212> PRT
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 <220>
 <223> Description of Artificial Sequence: 10-mer peptide
       from AN1792 sequence (human Abeta42, beta-amyloid
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peptide)

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<400> 26
Val Phe Phe Ala Glu Asp Val Gly Ser Asn
<210> 27
<211> 10
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence:10-mer peptide
      from AN1792 sequence (human Abeta42, beta-amyloid
      peptide)
<400> 27
Phe Phe Ala Glu Asp Val Gly Ser Asn Lys
<210> 28
<211> 10
<212> PRT
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<220>
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      from AN1792 sequence (human Abeta42, beta-amyloid
      peptide)
Phe Ala Glu Asp Val Gly Ser Asn Lys Gly
<210> 29
<211> 10
<212> PRT
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      from AN1792 sequence (human Abeta42, beta-amyloid
      peptide)
Ala Glu Asp Val Gly Ser Asn Lys Gly Ala
                . 5
 <210> 30
 <211> 10
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> Description of Artificial Sequence:10-mer peptide
       from AN1792 sequence (human Abeta42, beta-amyloid
       peptide)
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<400> 30
Glu Asp Val Gly Ser Asn Lys Gly Ala Ile
                  5
<210> 31
<211> 10
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence:10-mer peptide
      from AN1792 sequence (human Abeta42, beta-amyloid
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<400> 31
Asp Val Gly Ser Asn Lys Gly Ala Ile Ile
 <210> 32
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 <212> PRT
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       from AN1792 sequence (human Abeta42, beta-amyloid
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 <400> 32
 Val Gly Ser Asn Lys Gly Ala Ile Ile Gly
                    5
  <210> 33
  <211> 10
  <212> PRT
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  <220>
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  <400> 33
  Gly Ser Asn Lys Gly Ala Ile Ile Gly Leu
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  <210> 34
  <211> 10
  <212> PRT
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  <220>
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         peptide)
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Ser Asn Lys Gly Ala Ile Ile Gly Leu Met
<400> 34
  1
<210> 35
<211> 10
<212> PRT
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 Asn Lys Gly Ala Ile Ile Gly Leu Met Val
 <210> 36
 <211> 10
 <212> PRT
 <213> Artificial Sequence
  <223> Description of Artificia. Sequence:10-mer peptide
        from AN1792 sequence (human Abeta42, beta-amyloid
        peptide)
  <400> 36
  Lys Gly Ala Ile Ile Gly Leu Met Val Gly
                    5
  <210> 37
  <211> 10
   <212> PRT
   <213> Artificial Sequence
   <223> Description of Artificial Sequence:10-mer peptide
         from AN1792 sequence (human Abeta42, beta-amyloid
         peptide)
   <400> 37
   Gly Ala Ile Ile Gly Leu Met Val Gly Gly
                      5
     1
    <210> 38
    <211> 10
    <212> PRT
    <213> Artificial Sequence
    <223> Description of Artificial Sequence:10-mer peptide
          from AN1792 sequence (human Abeta42, beta-amyloid
          peptide)
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<400> 38
Ala Ile Ile Gly Leu Met Val Gly Gly Val
                  5
<210> 39
<211> 10
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence:10-mer peptide
      from AN1792 sequence (human Abeta42, beta-amyloid
      peptide)
<400> 39
Ile Ile Gly Leu Met Val Gly Gly Val Val
<210> 40
<211> 10
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence:10-mer peptide
       from AN1792 sequence (human Abeta42, beta-amyloid
      peptide)
Ile Gly Leu Met Val Gly Gly Val Val Ile
                   5
<210> 41
<211> 10
<212> PRT
<213> Artificial Sequence
 <220>
 <223> Description of Artificial Sequence:10-mer peptide
       from AN1792 sequence (human Abeta42, beta-amyloid
       peptide)
 <400> 41
 Gly Leu Met Val Gly Gly Val Val Ile Ala
   1
 <210> 42
 <211> 42
 <212> PRT
 <213> Homo sapiens
 <223> human Abeta42 beta-amyloid peptide
 <400> 42
 Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val His His Gln Lys
                                       10
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Leu Val Phe Phe Ala Glu Asp Val Gly Ser Asn Lys Gly Ala Ile Ile
                                  25
Gly Leu Met Val Gly Gly Val Val Ile Ala
         35
<210> 43
<211> 13
<212> PRT
<213> Artificial Sequence
 <220>
 <223> Description of Artificial Sequence:influenza
       hemagglutinin HA-307-319 universal T-cell epitope
 <400> 43
 Pro Lys Tyr Val Lys Gln Asn Thr Leu Lys Leu Ala Thr
                   5
 <210> 44
 <211> 13
 <212> PRT
 <213> Artificial Sequence
 <223> Description of Artificial Sequence: PADRE universal
        T-cell epitope
  <220>
  <221> misc_feature
  <222> (3)
  <223> Xaa = Any amino acid
  Ala Lys Xaa Val Ala Ala Trp Thr Leu Lys Ala Ala Ala
  <400> 44
                                        10
                    5
  <210> 45
  <211> 16
   <212> PRT
  <213> Artificial Sequence
   <223> Description of Artificial Sequence:malaria CS, T3
   <220>
         epitope universal T-cell epitope
   Glu Lys Lys Ile Ala Lys Met Glu Lys Ala Ser Ser Val Phe Asn Val
                                         10
                      5
     1
   <210> 46
   <211> 10
   <212> PRT
   <213> Artificial Sequence
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<220>
<223> Description of Artificial Sequence:hepatitis B
      surface antigen HBsAg-19-28 universal T-cell
      epitope
<400> 46
Phe Phe Leu Leu Thr Arg Ile Leu Thr Ile
<210> 47
<211> 19
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence:heat shock
      protein 65 hsp65-153-171 universal T-cell epitope
<400> 47
Asp Gln Ser Ile Gly Asp Leu Ile Ala Glu Ala Met Asp Lys Val Gly
                                      10
Asn Glu Gly
<210> 48
<211> 14
<212> PRT
<213> Artificial Sequence
 <220>
 <223> Description of Artificial Sequence:bacille
       Calmette-Guerin universal T-cell epitope
 <400> 48
 Gln Val His Phe Gln Pro Leu Pro Pro Ala Val Val Lys Leu
 <210> 49
 <211> 15
 <212> PRT
 <213> Artificial Sequence
 <223> Description of Artificial Sequence:tetanus toxoid
       TT-830-844 universal T-cell epitope
 Gln Tyr Ile Lys Ala Asn Ser Lys Phe Ile Gly Ile Thr Glu Leu
                    5
 <210> 50
 <211> 21
 <212> PRT
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<213> Artificial Sequence

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<220>
<223> Description of Artificial Sequence:tetanus toxoid
      TT-947-967 universal T-cell epitope
Phe Asn Asn Phe Thr Val Ser Phe Trp Leu Arg Val Pro Lys Val Ser
Ala Ser His Leu Glu
             20
<210> 51
<211> 16
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence:HIV gp120 T1
      universal T-cell epitope
<400> 51
Lys Gln Ile Ile Asn Met Trp Gln Glu Val Gly Lys Ala Met Tyr Ala
                                      10
<210> 52
<211> 22
<212> PRT
<213> Artificial Sequence
 <223> Description of Artificial Sequence:AN 90549 Abeta
       1-7/tetanus toxoid 830-844
 <400> 52
Asp Ala Glu Phe Arg His Asp Gln Tyr Ile Lys Ala Asn Ser Lys Phe
                                      10
 Ile Gly Ile Thr Glu Leu
              20
 <210> 53
 <211> 28
 <212> PRT
<213> Artificial Sequence
 <220>
 <223> Description of Artificial Sequence: AN 90550 Abeta
       1-7/tetanus toxoid 947-967
 Asp Ala Glu Phe Arg His Asp Phe Asn Asn Phe Thr Val Ser Phe Trp
 Leu Arg Val Pro Lys Val Ser Ala Ser His Leu Glu
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<210> 54
<211> 43
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: AN90542 Abeta
      1-7/tetanus toxoid 830-844 + 947-967
<400> 54
Asp Ala Glu Phe Arg His Asp Gln Tyr Ile Lys Ala Asn Ser Lys Phe
                  5
Ile Gly Ile Thr Glu Leu Phe Asn Asn Phe Thr Val Ser Phe Trp Leu
                                  25
Arg Val Pro Lys Val Ser Ala Ser His Leu Glu
<210> 55
<211> 22
 <212> PRT
 <213> Artificial Sequence
 <223> Description of Artificial Sequence: AN 90576 Abeta
       3-9/tetanus toxoid 830-844
 <400> 55
 Glu Phe Arg His Asp Ser Gly Gln Tyr Ile Lys Ala Asn Ser Lys Phe
                                       10
 Ile Gly Ile Thr Glu Leu
              20
 <210> 56
 <211> 20
 <212> PRT
 <213> Artificial Sequence
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       1-7/peptide
  <220>
  <221> misc_feature
  <222> (3)
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  <400> 56
  Ala Lys Xaa Val Ala Ala Trp Thr Leu Lys Ala Ala Ala Asp Ala Glu
                                        10
  Phe Arg His Asp
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<210> 57
<211> 34
<212> PRT
<213> Artificial Sequence
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<223> Description of Artificial Sequence: AN90543 Abeta
      1-7 \times 3/peptide
<220>
<221> misc_feature
<222> (24)
<223> Xaa = any amino acid
<400> 57
Asp Ala Glu Phe Arg His Asp Asp Ala Glu Phe Arg His Asp Asp Ala
  1
Glu Phe Arg His Asp Ala Lys Xaa Val Ala Ala Trp Thr Leu Lys Ala
Ala Ala
<210> 58
<211> 34
<212> PRT
<213> Artificial Sequence
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      with Abeta epitope
<220>
 <221> misc_feature
 <222> (3)
 <223> Xaa = any amino acid
 <400> 58
Ala Lys Xaa Val Ala Ala Trp Thr Leu Lys Ala Ala Ala Asp Ala Glu
 Phe Arg His Asp Asp Ala Glu Phe Arg His Asp Asp Ala Glu Phe Arg
 His Asp
 <210> 59
 <211> 20
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> Description of Artificial Sequence: fusion protein
       with Abeta epitope
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<220>
<221> misc feature
<222> (10)
<223> Xaa = any amino acid
<400> 59
Asp Ala Glu Phe Arg His Asp Ala Lys Xaa Val Ala Ala Trp Thr Leu
                  5
Lys Ala Ala Ala
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<210> 60
<211> 24
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: fusion protein
      with Abeta epitope
<400> 60
Asp Ala Glu Phe Arg His Asp Ile Ser Gln Ala Val His Ala Ala His
Ala Glu Ile Asn Glu Ala Gly Arg
              20
 <210> 61
 <211> 24
 <212> PRT
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 <223> Description of Artificial Sequence: fusion protein
       with Abeta epitope
 <400> 61
 Phe Arg His Asp Ser Gly Tyr Ile Ser Gln Ala Val His Ala Ala His
                    5
 Ala Glu Ile Asn Glu Ala Gly Arg
               20
 <210> 62
 <211> 24
 <212> PRT
 <213> Artificial Sequence
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  <223> Description of Artificial Sequence: fusion protein
        with Abeta epitope
  <400> 62
  Glu Phe Arg His Asp Ser Gly Ile Ser Gln Ala Val His Ala Ala His
                    5
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Ala Glu Ile Asn Glu Ala Gly Arg
             20
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<210> 63

<211> 34

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: fusion protein with Abeta epitope

<400> 63

Pro Lys Tyr Val Lys Gln Asn Thr Leu Lys Leu Ala Thr Asp Ala Glu

Phe Arg His Asp Asp Ala Glu Phe Arg His Asp Asp Ala Glu Phe Arg

His Asp

<210> 64

<211> 27

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: fusion protein with Abeta epitope

<400> 64

Asp Ala Glu Phe Arg His Asp Pro Lys Tyr Val Lys Gln Asn Thr Leu 10

Lys Leu Ala Thr Asp Ala Glu Phe Arg His Asp

<210> 65

<211> 34

<212> PRT

<213> Artificial Sequence

<223> Description of Artificial Sequence: fusion protein with Abeta epitope

Asp Ala Glu Phe Arg His Asp Asp Ala Glu Phe Arg His Asp Asp Ala

Glu Phe Arg His Asp Pro Lys Tyr Val Lys Gln Asn Thr Leu Lys Leu

Ala Thr

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```
<210> 66
<211> 27
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: fusion protein
      with Abeta epitope
<400> 66
Asp Ala Glu Phe Arg His Asp Asp Ala Glu Phe Arg His Asp Pro Lys
                  5
Tyr Val Lys Gln Asn Thr Leu Lys Leu Ala Thr
                                  25
<210> 67
<211> 79
<212> PRT
<213> Artificial Sequence
<223> Description of Artificial Sequence: fusion protein
      with Abeta epitope
<400> 67
Asp Ala Glu Phe Arg His Asp Pro Lys Tyr Val Lys Gln Asn Thr Leu
Lys Leu Ala Thr Glu Lys Lys Ile Ala Lys Met Glu Lys Ala Ser Ser
Val Phe Asn Val Gln Tyr Ile Lys Ala Asn Ser Lys Phe Ile Gly Ile
                                                45
 Thr Glu Leu Phe Asn Asn Phe Thr Val Ser Phe Trp Leu Arg Val Pro
 Lys Val Ser Ala Ser His Leu Glu Asp Ala Glu Phe Arg His Asp
 <210> 68
 <211> 57
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> Description of Artificial Sequence: fusion protein
       with Abeta epitope
 <400> 68
 Asp Ala Glu Phe Arg His Asp Asp Ala Glu Phe Arg His Asp Asp Ala
                                       10
 Glu Phe Arg His Asp Gln Tyr Ile Lys Ala Asn Ser Lys Phe Ile Gly
               20
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Ile Thr Glu Leu Phe Asn Asn Phe Thr Val Ser Phe Trp Leu Arg Val

40

35

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Pro Lys Val Ser Ala Ser His Leu Glu
<210> 69
<211> 44
<212> PRT
<213> Artificial Sequence
<223> Description of Artificial Sequence: fusion protein
      with Abeta epitope
<400> 69
Asp Ala Glu Phe Arg His Asp Gln Tyr Ile Lys Ala Asn Ser Lys Phe
Ile Gly Ile Thr Glu Leu Cys Phe Asn Asn Phe Thr Val Ser Phe Trp
                                  25
Leu Arg Val Pro Lys Val Ser Ala Ser His Leu Glu
         35
<210> 70
<211> 51
<212> PRT
<213> Artificial Sequence
<223> Description of Artificial Sequence: fusion protein
       with Abeta epitope
 <400> 70
Asp Ala Glu Phe Arg His Asp Gln Tyr Ile Lys Ala Asn Ser Lys Phe
   1
 Ile Gly Ile Thr Glu Leu Cys Phe Asn Asn Phe Thr Val Ser Phe Trp
 Leu Arg Val Pro Lys Val Ser Ala Ser His Leu Glu Asp Ala Glu Phe
                                                   45
 Arg His Asp
      50
 <210> 71
 <211> 26
 <212> PRT
 <213> Artificial Sequence
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       fusion protein
 Glu Gln Val Thr Asn Val Gly Gly Ala Ile Ser Gln Ala Val His Ala
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Ala His Ala Glu Ile Asn Glu Ala Gly Arg 20 <210> 72 <211> 13

<212> PRT <213> Artificial Sequence

<220> <223> Description of Artificial Sequence: Abeta 1-12 peptide with inserted Cys residue

<400> 72 Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val Cys 10 5

<210> 73 <211> 6 <212> PRT <213> Artificial Sequence

<223> Description of Artificial Sequence: Abeta 1-5 peptide with inserted Cys residue

<400> 73 Asp Ala Glu Phe Arg Cys 1

<210> 74 <211> 12 <212> PRT <213> Artificial Sequence

<220> <223> Description of Artificial Sequence: Abeta 33-42 peptide with inserted Cys residue

<220> <221> MOD_RES <222> (2) <223> Xaa = amino-heptanoic acid <400> 74

Cys Xaa Gly Leu Met Val Gly Gly Val Val Ile Ala

<210> 75 <211> 19 <212> PRT <213> Artificial Sequence

<223> Description of Artificial Sequence: Abeta 13-28 peptide with two Gly residues added and inserted Cys residue

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<220>
<221> MOD_RES
<222> (1)
<223> Xaa = N-acetyl His
<400> 75
Xaa His Gln Lys Leu Val Phe Phe Ala Glu Asp Val Gly Ser Asn Lys
Gly Gly Cys
<210> 76
<211> 4
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence:linker
 <400> 76
Glu Gly Glu Gly
  1 ·
 <210> 77
 <211> 22
 <212> PRT
 <213> Artificial Sequence
 <223> Description of Artificial Sequence: fusion protein with Abeta epitope
 <400> 77
 Asp Ala Glu Phe Arg His Asp Gln Tyr Ile Lys Ala Asn Ser Lys Phe
   1
 Ile Gly Ile Thr Glu Leu
               20
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